

TRANSPARENT COOLING DUCT

ABSTRACT OF THE INVENTION

A system and method for measuring the thermal distributions of an electronic device during operation is described. In an embodiment of the present invention, the system includes a duct adapted to be coupled with an electronic device and a coolant flowing through the duct so as to cool the electronic device. The duct and the coolant are at least partially transparent to photons with wavelengths between about 0.1 micron to 20 microns. The system further includes a photon detector located adjacent to the duct for detecting photons. The photon detector captures thermal information from the electronic device during operation of the electronic device, wherein the electronic device is operating under conditions for which the electronic device is designed. The system further includes a processor coupled to the photon detector for generating a thermal distribution of the electronic device based on information received from the photon detector.